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**Comments on the second draft of standards for responsible freshwater Trout aquaculture  
by the Freshwater Trout Aquaculture Dialogue (FTAD2)**

Dear Christoph  
Dear members of the FTAD steering committee

Thank you for the opportunity to comment on your second draft again.  
Like the first time, we focus on the two following issues.

**Animal Welfare**

*FTAD2, page 5*

*The standards focus on the environmental and social impacts of Trout farming. Food safety, sentient fish welfare and the nutritional value of farmed trout are not addressed directly in the standards. However, they are dealt with indirectly through fish health, water quality, feed composition and other standards.*

*FTAD2, page 26, footnote 25*

*"Welfare" is defined here as functional welfare, meaning fish are raised under environmental conditions that promote healthy growth and development incurring minimal stress.*

*FTAD2, page 29*

***Additional information for reviewing the second draft***

*These standards seek to ensure "functional welfare," meaning fish are raised under environmental conditions that promote healthy growth and development while incurring minimal stress. Attending to these aspects of fish welfare is an impor-*

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*tant component of promoting fish health and minimizing the risks of associated environmental impacts. Other aspects of fish welfare that don't have a clear environmental link, such as harvesting techniques (humane slaughter) are not addressed.*

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Reading WWF's Aquaculture Dialogues website we learn that the «Dialogue participants have identified six principles that provide the framework for developing the criteria, indicators and standards for responsible freshwater Trout farming.»

Among these principles we find «**4. Proactively maintain the health and welfare of cultured fish and minimize risk of disease transmission**

Despite this, draft 2 does still not directly address animal welfare. **We therefore remind you of our input to draft 1 and would like to underline the following:**

**1. Any cetification scheme for aquaculture should address animal welfare as it is, together with ecology and sustainability issues, the core concern.** Aquaculture is about rearing and treating animals first of all.

If you are really to set up a standard for responsible Trout farming without addressing issues like ethology and «humane slaughter», you resp. the farmers who follow your standard will sure have to correct this in future – then certainly under pressure of consumers instead of proactively by your own will.

We again strongly advise you to search for experts in fish ethology and invite them to your dialogue. We would like to offer our help in making contacts to relevant persons.

**2. Fish welfare is more than just health of the fish.** Fish health is an outcome of fish welfare. Conversely, factors enhancing fish welfare do of course embrace fish health, but many other factors are responsible also, e. g.:

- species appropriate structure of the artificial habitat (allowing a variety of flow velocities, light/shadow, withdrawal of subdominant individuals, a.s.o.)
- species appropriate stocking density (which is a component of fish welfare and not to be discussed with regard to fish health solely)
- avoidance of rapid temperature changes, of noise and frightening

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- minimum requirements for handling, transportation, stunning and killing
- minimum requirements for rearing practices (species engineering)
- a.s.o.

3. **Lack of animal welfare** in a fish farm is directly linked with a range of subsequent issues which, by the way, have economical consequences:

- increased disposition to disease and increased rates of medicamentous treatment
- increased inclination to (genetically) engineer the species in order to render the animals more «robust»
- increased tendency to escape from inappropriate living conditions
- increased mortality
- loss of flesh quality

It is hard to understand how a scheme fostered by WWF and other NGOs can just look away when it comes to the «leading characters» in aquaculture.



fish in : fish out ratio (FIFO)

FTAD2, page 31

**Criterion 5.2 Responsible origin of marine raw materials**

INDICATOR	STANDARD
5.2.1 Percentage of fishmeal and fish oil used in feed that comes from fisheries certified under a scheme that is ISEAL accredited and has guidelines that of the FTAD standards and specifically promote responsible environmental management of small pelagic fisheries.	10% within 3 years of cation and 100% within 5 ye
5.2.2 Prior to 100% achievement of 5.2.1, the Fishsource score re for the fisheries from which marine raw material in feed is derived (excluding trimming and by-products).	All individual scores ≥ and biomass score ≥ 8
5.2.3 Prior to 100% achievement of 5.2.1, demonstration of chain custody and traceability for fisheries products in feed through an ISEAL accredited or ISO compliant certification scheme that incorporates United Nations Food and Agriculture Organization's "Code of Conduct for Responsible Fisheries."	Yes
5.2.4 Evidence that by-product feed ingredients do not come from species that are categorized as vulnerable, endangered, or critically endangered Yes according to the IUCN Red List of Threatened Sp	Yes

FTAD2, page 32

In the medium term, the standards will require marine ingredients in feed to be certified by a widely recognized authority. This recognized authority must be accredited by the ISEAL Alliance, which promotes transparent, multi-stakeholder standard-setting processes. The authority also must specifically address the challenges of small pelagic fisheries. Currently the Marine Stewardship Council (MSC) is the only scheme that is ISEAL accredited, and MSC is in the process of developing specific standards for small pelagic fisheries. Additional schemes may emerge in the future that meet these requirements.

Given the current lack of certified sources of fishmeal and fish oil, the FTAD uses two interim standards to immediately promote steps toward responsible sourcing. First, Fishsource provides scores on many fisheries that can be roughly equated to the scoring system of MSC. Second, standard 5.2.3, seeks to have feed suppliers use the International Fishmeal and Fish Oil Organization (IFFO) Responsible Sourcing standard or a future equivalent that might emerge. These standards support the use of marine trimmings and by-products, as long as they do not come from endangered or vulnerable fisheries.



1. Generally, one would expect that an aquaculture standard fostered by WWF and other NGOs sets a top priority in reducing wild fish consumption for fish feed.

The reduction of use of forage fish is not only an issue of stock preservation but also a major animal welfare concern: Counted in individuals, the predominant majority of wild fish caught are destined for the production of fishmeal and fish oil, mainly for feeding purposes in aquaculture.

The industrial fishing methods applied onto these stocks do not address the suffering of the animals in any way, neither during the catch by huge nets nor during the slaughter process. While wild fish in general are treated like a unconscious biomass, this is all the more true for the catch of forage fish.

We acknowledge that predators like Trouts cannot (yet) be fed without any fish (which as a matter of fact is a much criticized fact with most species farmed for the markets in Europe and Northern America. But the development of a fully fishery independent aquaculture should be taken serious as a goal to be reached, and the definition of an overall reduction of the FIFO would enhance such development.

With regard to the forage fish still needed until then, it is of course crucial to define the stocks which can be sustainably used. Given the continuous and fast growth of the aquaculture industry, we feel the problem of sustainable sourcing is quite bigger than the problem solution presented by FTAD. Why do you consider ISEAL and MSC as the only instruments to guarantee appropriate catch? Why not include forage fisheries already certified by Friend of the Sea in good quantities?

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#### **Auditing guidance**

*While the Fishsource scores required under 5.3.2 must be calculated using Fishscore methodology, an organization other than Fishsource may calculate the scores.*



*Criterion 5.3 Dependency on wild-caught marine ingredients in feed*

INDICATOR	STANDARD
5.3.1 Fishmeal Forage Fish Dependency Ratio (FFDR <sub>m</sub> ) for grow-out (calculated using formulas in Appendix III, subsection 1)	≤1.5
5.3.2 Compliance with one of the two following standards: a) Fish Oil Forage Fish Dependency Ratio (FFDR <sub>o</sub> ) for grow-out (calculated using formulas in Appendix III, subsection 1) or b) Maximum level of EPA/DHA content from marine sources as a percentage of fatty acids in the feed (excluding EPA/DHA from trimmings and byproducts)	a) ≤2.95  or b) ≤ 9%

FTAD2, page 57

**1. Forage Fish Dependency Ratio calculation**

Feed Fish Dependency Ratio (FFDR) is the quantity of wild fish used per quantity of cultured fish produced. This measure can be weighted for fishmeal or fish oil, whichever component creates a larger burden of wild fish in feed. In the case of Trout at current status, the fish oil usually will be the determining factor for the FFDR. The dependency on wild forage fish resources should be calculated for fishmeal and fish oil using the formulas provided below. In this standard, it is the highest number (i.e., dependency) that is relevant and which must be used. This formula calculates the dependency of a single site on wild forage fish resources, independent of any other farm.

$$FFDR_m = \frac{(\% \text{ fishmeal in feed from forage fisheries}) \times (eFCR)}{22.2}$$

$$FFDR_o = \frac{(\% \text{ Fish oil in feed from forage fisheries}) \times (eFCR)}{5.0}$$

Compared with draft 1, we do not see much improvement in draft 2.

We therefore remind you of our input to draft 1 and would like to underlien the following:

2. The formulas presented in the draft are too complicated in practice – and too permissive instead of reducing resolutely the FIFO to an absolute minimum.



3. We advocate a more determined and more pragmatical formula which clearly limits the use of forage wild fish to one-fifth of the farmed fish weight while making best use of fish by-products and waste fish, as defined in the fair-fish standard for aquaculture:

6.1 Feed components that originate from wild fish caught for feeding purpose may not exceed a fish in : fish out ratio (FIFO) of 0.2 : 1.0 on the farm in question, i. e. for the production of 1 kg farmed fish (harvest live weight) at the most 200 g of wild fish (live weight) may be fed.

This FIFO does not embrace:

- Fishmeal and fish oil which verifiably origin from by-products (trimmings) of processed farmed fish, but at the maximum the weight that can be produced out of the by-products provided by the farm in question.
- Fishmeal and fish oil which stem from the following sources but do not exceed a maximum of 30% of the total of fishmeal and fish oil employed by the farm in question:
  - by-products of fish (certified or not)
  - not marketable fish from certified sustainable fisheries
  - not marketable fish which had to be fished away by directive of the competent fishing authority in order to keep up the ecosystem's equilibrium

6.2 As far as available, the farm in question employs fishmeal and fish oil products approved by one of the following certification schemes: fair-fish, a bio-label, MSC or Friend of the Sea.

6.3 Fishmeal or fish oil it shall not originate from the species to be fed.

4. Such a formula can be managed by the feed producer and be controlled alongside with other criteria for fish feed.

In practice, for freshwater Trout farming this would mean a farm could employ fishmeal up to the following amount per kg of farmed fish (harvest live weight):

- 22,2% of 200 g wild fish = 44.4 g fishmeal
- 22,2% of 50% per kg of farmed fish (harvest live weight)= 111.0 g fishmeal (supposed the by-products represent 30% of the harvest live weight and are recycled to fishmeal)
- 66.6 g (30% of the total of fish meal employed by the farm)

Thus up to 222 g fish meal per kg farmed fish (harvest live weight) would be tolerated even under the strict fair-fish approach. This satisfies at least 2/3 of what is usually employed today. It should not be so difficult to drive the Trout industry there, should it?



Similar calculation has to be made with fish oil of course.

5. Any foresighted Trout farmer who claims to produce sustainable and to present an alternative to the depletion of fish stocks should aim at phasing out his fishmeal and fish oil input according to such calculation (and even to zero) before public pressure urges him to do so overnight.

### Conclusion

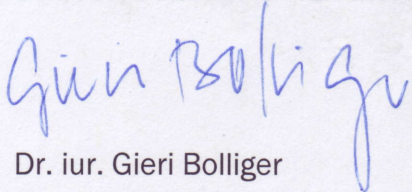
We take the efforts made by FTAD participants for serious, and we are far from polemics about the results as the task is not so easy.

Nevertheless we feel that responsible Trout farming should yield a good answer to the two questions discussed above. With the criteria presented in draft 2, ASC would just bring in more of the same. This is not the answer concerned consumers are expecting – and consequently it is not a standard concerned farmers could relay upon for long. When will they have to reinvest next time to cope with demand?

Thank you very much for taking our input into account.

Kind regards

STIFTUNG FÜR DAS TIER IM RECHT



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